Geothermal Heating and Cooling

Frequently Asked Questions

1. **How do I know if I qualify for a grant?**

   If you live in Delaware and pay an electric bill to Delmarva Power, Delaware Electric Cooperative or any Municipality excluding New Castle you are eligible for a Green Energy Program Grant.

2. **Which Green Energy Program do I qualify for?**

   Since each utility has a Green Energy Program for its customers you qualify for the one that you pay your electric bill too. For example if you pay your electric bill to Delmarva Power you qualify for its program. If you pay your electric bill to Delaware Electric Cooperative then you qualify for its program. All programs are managed by the Delaware Energy Office. If you have any questions call (302) 735-3480 first.

3. **What Geothermal systems qualify for a grant in the Green Energy Program?**

   The Green Energy Program accepts grant requests for open or closed loop systems or direct expansion systems that use the thermal energy from the ground or groundwater as a heat source and heat sink for space heating and/or cooling. The system may provide both space heating and cooling, cooling only or heating only functions. All units installed under this program must have a minimum EER of 14.0 and COP of 3.0.

   Open loop geothermal systems consist of a ground heat exchanger in which the heat transfer fluid is part of a larger environment. All open loop systems shall qualify under rating conditions in accordance with ISO 13256-1. All qualifying systems must be installed in accordance with the standards and specification of the manufactures of the components and in compliance with all applicable electrical, plumbing and building codes.

   The closed loop geothermal system consists of a ground heat exchanger in which the heat transfer fluid is permanently contained in a closed system. All closed loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

   Direct Exchange systems consist of a geothermal heat pump system in which the refrigerant is circulated in pipes buried in the ground, rather than using a heat transfer fluid such as water or antifreeze solution in a separate closed loop. All direct exchange systems shall qualify under rating conditions in accordance with ARI 870.

4. **Will my system be sized using the Manual J calculation?**

   All qualifying systems must be sized in accordance with good heating, ventilation and air conditioning design practices for the occupancy and location. The vendor shall submit a Manual J Calculation or equivalent calculation with the Grant Reservation Request Form to document the system size.

5. **The system I am installing is just a replacement do I need a Manual J Calculation?**

   Yes, all grant applications must include a Manual J Calculation.

6. **If I have a pre-existing well do I need to supply a permit for this well with my application?**

   Yes all wells must have a permit supplied regardless if they are preexisting or not. Please contact the DNREC Well department (302) 739-9944 with your tax parcel ID to obtain a copy.

7. **Will my system have a warranty? Who provides the warranty?**

   All qualifying systems must have a warranty for protection of the integrity and performance of the components for at least 5 years. The installation contractor provides the warranty. The installation contractor shall include the warranty documents with the systems operating and owner's manual.

8. **My system qualified for a special grant from another source. Will this affect the Green Energy Program grant calculation?**

   Yes. All other incentives associated with the project such as grants, rebates, buy downs, cost sharing or any similar form of financial support (other than the federal tax credit) must be subtracted from the total system cost prior to calculating the grant.

9. **How are the grants calculated? Is there a maximum grant amount?**

   Subject to availability of funds, grants for geothermal heat pump systems installed by qualified contractors and customers may be funded at the following rates:

   Residential:

   $600 per ton not exceeding $3,000 per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

   $500 per ton not exceeding $2500 per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

Non-residential:

   $600 per ton not exceeding $25,000 for Delmarva Power Customers and not exceeding $20,000 for Delaware Electric Cooperative and Municipal Customers per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

   $500 per ton not exceeding $25,000 for Delmarva Power Customers and not exceeding $20,000 for Delaware Electric Cooperative and Municipal Customers for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

10. **For more information contact: Scott Lynch (302) 735 -3480 or email Scott.Lynch@state.de.us**